32.     (Once Amended)  The system of claim 30, wherein the teacher's computer is immediately responsive to an aggregate of correct and incorrect student responses.

34.     (Once Amended)  The system of claim 27, wherein the teacher's computer includes program instructions for selecting a student response on the screen of the teacher's computer and subjectively modifying a score resulting from operation of the comparison and evaluation login on response data received from at least one of the plurality of student computers.

35.     (Once Amended)  The system of claim 27, wherein the plurality of student computers are immediately responsive to a result of the comparison and evaluation logic through a feedback signal receivable at each of the plurality of student computers.

## REMARKS

### PENDING CLAIMS

By this reply, claims 1, 2, 6, 11, 12, 18-20, 22, 23, 26, 27, 28, 32, 34, and 35 have been amended and claim 36 has been canceled.  Of these, claims 1, 18, 23, 26, and 27 are independent.  Thus, claims 1-35 and 37 are pending.  Claims 1-2, 4-12, 14, 16-24, 26-28, and 30-35 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Ziv-el (U.S. Pat. No. 6,302,698 B1).  Claims 3, 25 and 29 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ziv-el in view of Pelligrino et al. (U.S. Pat. No. 6,149,441). Claims 13 and 36 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ziv-el in further view of Shende et al. (U.S. Pat. No. 6,341,212), and claims 15 and 37 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ziv-el.  These rejections are respectfully traversed.

## OBJECTIONS TO THE CLAIMS

Claims 1, 18, 23, 26 and 27 were objected to because of the use of "URL's". Claim 1 has been amended to include "Uniform Resource Locators". Claims 1, 23, 26 and 27 were also objected to, because these claims do not begin with an article. These claims have been amended to begin with an article. In light of the amendments to overcome these objections, the Applicants respectfully request that these objections be withdrawn.

## REJECTION UNDER 35 USC § 112

Claim 2 was rejected under 35 USC § 112, because "Internet" lacks antecedent basis and "through with the Internet" is unclear. Claim 2 has been amended to address this rejection, and the Applicants respectfully request that this rejection be withdrawn.

## REJECTION UNDER 35 USC § 102

Claims 1-2, 4-12, 14, 16-24, 26-28, and 30-35 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Ziv-el. The Applicants respectfully traverse this rejection.

According to an embodiment, the Applicants' specification discloses that exercises, including one or more web pages, are transmitted to student computers. *See* specification, p. 3, lines 25-32. Web pages and questions relating to the web pages are incorporated in exercises providing an on-line learning tool for students. Figure 1 discloses an exercise displayed, for example, on a student's computer. The exercise may include one or more URL's listed in the list box 1. These URL's point to web sites associated with the exercise. As shown in figure 1, the exercise, for example, includes a question related to a URL high-lighted in the list box 1. A web page referenced by the URL may be displayed in a separate window or in the display box 2.

Claim 1 recites, *inter alia*, lessons including exercises having URL's and displaying a web page by referring to a URL received with the exercise. Ziv-el fails to teach at least these features of claim 1.

The rejection of claim 1 cites to columns 7 and 8 of Ziv-el to teach an exercise, including a web page relating to a URL, displayed on a screen of a student's computer. Ziv-el teaches that student computers communicate with an HTTP server via a browser to receive HTML pages. *See* column 8, lines 53-58. Ziv-el also teaches that a URL is entered when a student logs into a portable computer. *See* column 18, lines 39-48. It appears that a URL of Ziv-el identifies a server or teacher's computer and is used for logging into the teaching system of Ziv-el and possibly for receiving an exercise. Ziv-el, however, fails to teach an exercise having a URL or receiving a URL with an exercise. Instead, the exercises of Ziv-el are only question and answer based without URLs or web pages. *See* figure 3B and column 9, lines 50-53 and 65-68.

For anticipation under 35 USC § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. *See* MPEP, § 706.02. Ziv-el fails to teach, explicitly or impliedly, the above-described features of independent claim 1 and dependent claims 2-17. Consequently, claims 1-17 are believed to be allowable, and the Applicants request that the rejection of these claims be withdrawn.

Independent claim 18 recites, *inter alia*, displaying student multi-character responses on a computing device operable to be used by a teacher from a database. The rejection of claim 18 appears to cite column 11, lines 19-24 of Ziv-el to teach the features of claim 18. As indicated in column 11, lines 19-24, student responses are stored in a buffer 56 on a response server 6, <u>instead of a database</u>, so a teacher can observe on a monitor virtually character-by-character a student's response. Accordingly, Ziv-el fails to teach, explicitly or

impliedly, displaying responses from a database, as recited in independent claim 18. Consequently, claims 18-22 are believed to be allowable, and the Applicants request that the rejection of these claims be withdrawn.

Independent claim 23 recites, *inter alia*, creation of an indicator on a web page on a teacher's screen which copies to same positions on corresponding web pages on screens of student computers. The rejection of claim 23 fails to address this feature, and Ziv-el fails to teach explicitly or impliedly this feature of claim 23. Consequently, independent claim 23 and dependent claims 24-25 are believed to be allowable, and the Applicants request that the rejection of these claims be withdrawn.

Independent claim 26 recites, *inter alia*, a teacher's computer includes program instructions for importing web pages <u>associated with one or more external web sites</u> from a file system. Ziv-el fails to teach importing web pages associated with one or more external web sites. Ziv-el does not teach utilizing web pages associated with external web sites in any manner. Accordingly, independent claim 26 is believed to be allowable, and the Applicants request that the rejection of this claim be withdrawn.

Independent claim 27 recites, *inter alia*, displaying at least one page associated with an external web site and a question concerning the web page. Ziv-el fails to teach a question associated with an external web page. As described above, the exercises of Ziv-el, which include questions for students, are not associated with an external web site. Accordingly, independent claim 27 and dependent claims 28-35 and 37 are believed to be allowable, and the Applicants request that the rejection of these claims be withdrawn.

## REJECTIONS UNDER 35 USC § 103

Claims 3, 25 and 29 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ziv-el in view of Pelligrino et al. (U.S. Pat. No. 6,149,441). Claims 13 and

36 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ziv-el in

further view of Shende et al. (U.S. Pat. No. 6,341,212), and claims 15 and 37 were rejected

under 35 U.S.C. §103(a) as allegedly being unpatentable over Ziv-el. These rejections are

respectfully traversed.

Claims 3, 13, 15, 25, 29, 36 and 37 are believed to be allowable for at least the

reasons described above with respect to the corresponding independent claim, and the

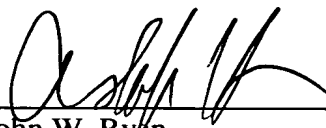Applicants request that the rejections under 35 U.S.C. §103(a) be withdrawn.


## CONCLUSION

As all of the outstanding rejections have been traversed and all of the claims are

believed to be in condition for allowance, the Applicants respectfully request issuance of a

Notice of Allowability. If the undersigned attorney can assist in any matters regarding

examination of this application, the Examiner is encouraged to call at the number listed

below.

Respectfully submitted,

WILMER, CUTLER & PICKERING

Date: ___11/8/02___

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# VERSION WITH MARKINGS TO SHOW CHANGES MADE

## IN THE CLAIMS:

1.      [In a] A networked teaching and learning system having a plurality of student computers, each having an input device and a screen, and having at least one teacher's computer including an input device and a screen, the networked system further comprising:

at least one data storage server for storage of lessons, said lessons including exercises having Uniform Resource Locators (URL's), questions and multi-character answers,

a response server in communication with the student computers for processing student responses; and

Web browsers on the teacher's computer and the student computers for communicating through a Web server in response to URL's received from the teacher and student computers;

wherein a teacher's computer and the students' computers include program instructions responsive to inputs to cause an exercise, including a Web page relating to a URL, to be displayed on the screen of at least one of the student computers;

wherein the student computer includes program instructions for displaying the Web page by referring to the URL received with the [question] exercise, and for immediately transmitting each character resulting from an input on the student computer, to the response server; and

further comprising comparison and evaluation logic for comparison and evaluation of the character with a homologous character of at least one answer to the question; and

wherein the teacher's computer includes program instructions for the teacher's screen to be contemporaneously responsive to the character from [the] a student keystroke and to [the] a result of the comparison and evaluation.

2.     The system of claim 1, wherein the teacher and the students communicate through [with the] an Internet connection.


6.     The system of claim 4, wherein the teacher's computer is immediately responsive to [the] an aggregate of correct and incorrect student responses.


11.     The system of claim 1, wherein the teacher's computer includes program instructions for selecting a student response on the screen of the teacher's computer and subjectively modifying [the] a score resulting from operation of the comparison and evaluation logic on response data received from at least one of the plurality of student computers.


12.     The system of claim 1, wherein the plurality of student computers are immediately responsive to [the] a result of the comparison and evaluation logic through a feedback signal receivable at each of the plurality of student computers.


18.     A method of online teaching of a plurality of students with an exercise relating to a Web site, including the steps of:

communicating a URL for the Web site to each of the plurality of students;

displaying the Web page from the Web site to each of a plurality of students;

communicating [the] student multi-character responses as they are formed, character-by-character, to a database; and

displaying [to the] <u>on a computing device operable to be used by a</u> teacher the responses from the plurality of students from the database character-by-character as each character is received in the database.

19.     The method of claim 18, wherein the teacher initiates the communication of the URL to the [multiplicity] <u>plurality</u> of students, and the Web page of the Web site is simultaneously displayed to the teacher and the students.

20.     The method of claim 18, wherein the exercise includes a question and a multi-character correct answer and the question is communicated with the URL to each of the plurality of students; and

wherein the student responses are compared and evaluated against [the] <u>a</u> correct answer, and where the appearance of each response to the teacher is associated with the correctness of the response.

22.     The method of claim 20, wherein the exercise includes a question and a multi-character correct answer and the question is communicated with the URL to each of the [multiplicity] <u>plurality</u> of students, and where the student responses are compared and evaluated against the correct answer, and where the student receives a feedback signal immediately on insertion of a character of a correct response.

23.     [In a] <u>A</u> networked teaching and learning system having a plurality of student computers, each having an input device and a screen, and having at least one teacher's computer including an input device and a screen, the networked system further comprising:

Web browsers on the teacher's computer and the student computers for communicating in response to URL's received from the teacher and student computers;

a Web server at a Web site for communicating with the Web browsers of the student computers and the teacher's computers;

wherein the teacher's computer includes program instructions responsive to teacher inputs to cause a Web page relating to a URL, to be displayed on the teacher's screen and to further cause the URL to be transmitted to each of the student computers;

wherein the student computers include program instructions for displaying the Web page in response to receiving [a] the corresponding URL; and

wherein the teacher's computer includes program instructions for creation of an indicator on the Web page on the teacher's screen which copies to [the] same positions on the corresponding Web pages on the screens of the student computers.


26.     [In a] A networked teaching and learning system having a plurality of student computers, each having an input device and a screen, and having at least one teacher's computer including an input device and a screen, the networked system further comprising:

a Web server at a Web site for publishing Web pages;

wherein the teacher's computer includes program instructions for importing Web pages associated with one or more external web sites from a file system, placing them in a location on the file system of the Web server, and generating [the] a URL for the location; and

wherein the student computers include program instructions for displaying the Web page by selecting the URL.

27.     [In a] <u>A</u> networked teaching and learning system having a plurality of student computers, each having an input device and a screen, and having at least one teacher's computer including an input device and a screen, the networked system further comprising:

at least one data storage server for storage of lessons, said lessons including exercises having questions and multi-character answers;

a response server in communication with the student computers for processing student responses;

Web browsers on the teacher's computer and the student computers for communicating through a Web server in response to URL's received from the teacher and student computers;

wherein the Web browsers on the teacher's computer and the student computers includes program instructions responsive to inputs to cause an exercise to be displayed on the screen of at least one of the student computers;

wherein Web browser on the student computer includes program instructions for immediately transmitting each character resulting from an input on the student computer, to the response server; [and]

further comprising comparison and evaluation logic for comparison and evaluation of the character with a homologous character of at least one answer to the question; [and]

wherein the Web browser on the teacher's computer includes program instructions for the teacher's screen to be contemporaneously responsive to the character from [the] <u>a</u> student keystroke and to [the] <u>a</u> result of the comparison and evaluation[.]<u>; and</u>

<u>wherein the student computers display a window displaying at least one Web page associated with an external Web site and a question concerning the Web page.</u>

28.     The system of claim 27, wherein the teacher and the students communicate through [with] the Internet.


32.     The system of claim 30, wherein the teacher's computer is immediately responsive to [the] an aggregate of correct and incorrect student responses.


34.     The system of claim 27, wherein the teacher's computer includes program instructions for selecting a student response on the screen of the teacher's computer and subjectively modifying [the] a score resulting from operation of the comparison and evaluation logic on response data received from at least one of the plurality of student computers.


35.     The system of claim 27, wherein the plurality of student computers are immediately responsive to [the] a result of the comparison and evaluation logic through a feedback signal receivable at each of the plurality of student computers.